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(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];  
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HENDRIKS, Antonius, M., P., J.** [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **GUELEN, Josephus, F., A., M.** [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **DORMANS, Guido, J., M.** [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(74) Agent: **DULJVESTIJN, Adrianus, J.**; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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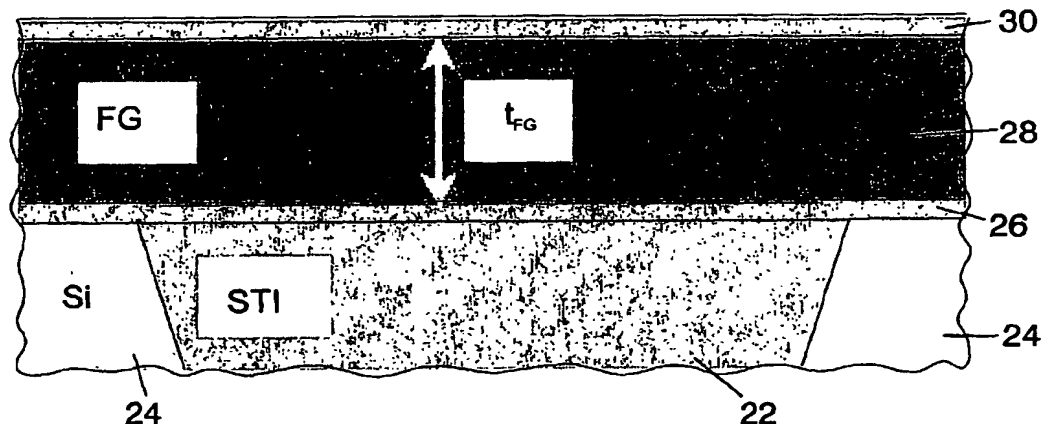
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(54) Title: CONDUCTIVE SPACERS EXTENDED FLOATING GATES



(57) Abstract: A method for manufacturing on a substrate (24) a semiconductor device with improved floating-gate to control-gate coupling ratio is described. The method comprises the steps of first forming an isolation zone (22) in the substrate (24), thereafter forming the floating gate (28) on the substrate (24), thereafter extending the floating gate (28) using polysilicon spacers (40), and thereafter forming the control gate (44) over the floating gate (28) and the polysilicon spacers (40). Such a semiconductor device may be used in flash memory cells or EEPROMs.

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 H01L21/28 H01L29/788 H01L21/8247 H01L27/115

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
 EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 198 40 984 A (SIEMENS AG) 18 November 1999 (1999-11-18) the whole document	1-18
A	US 6 235 589 B1 (MEGURO HISATAKA) 22 May 2001 (2001-05-22) the whole document	1-18
A	WO 99 44239 A (HOFMANN FRANZ ; SIEMENS AG (DE); WILLER JOSEF (DE)) 2 September 1999 (1999-09-02) the whole document	1-18
A	US 6 159 801 A (HSIEH CHIA-TA ET AL) 12 December 2000 (2000-12-12) abstract	1-18
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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Albrecht, C.

# INTERNATIONAL SEARCH REPORT

Application No  
PCT/IB 03/02738

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 753 951 A (GEISSLER STEPHEN FRANK)  19 May 1998 (1998-05-19)  abstract</p>	1-18

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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